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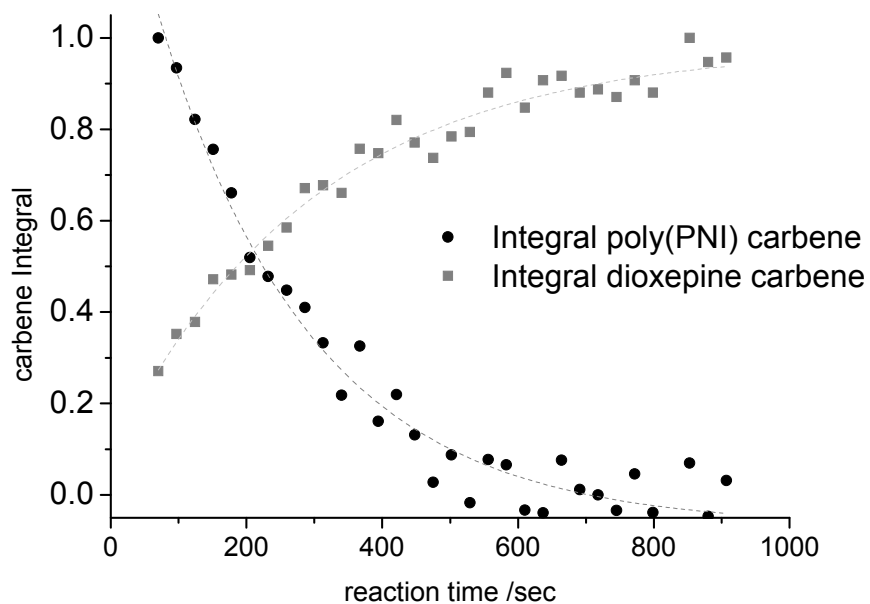
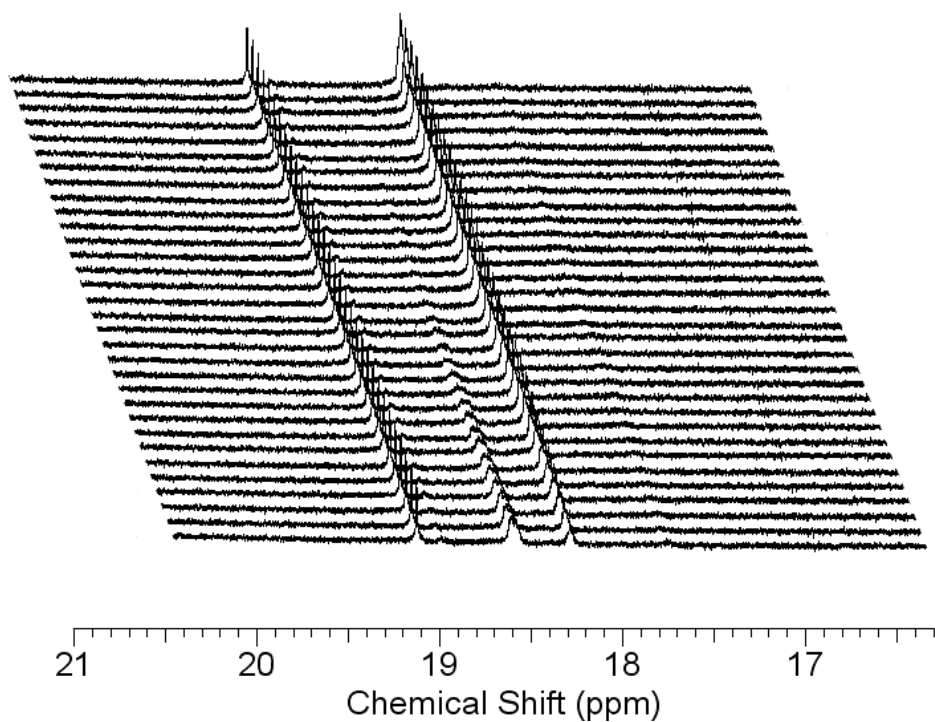
Sacrificial Synthesis of Hydroxy-
functionalized ROMP polymers – An
efficiency study

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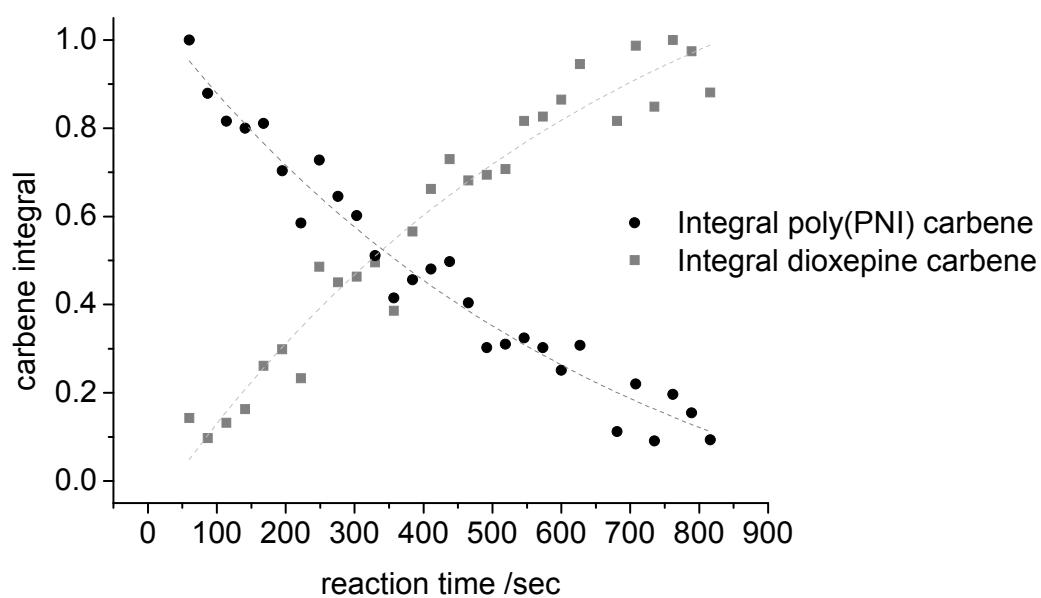
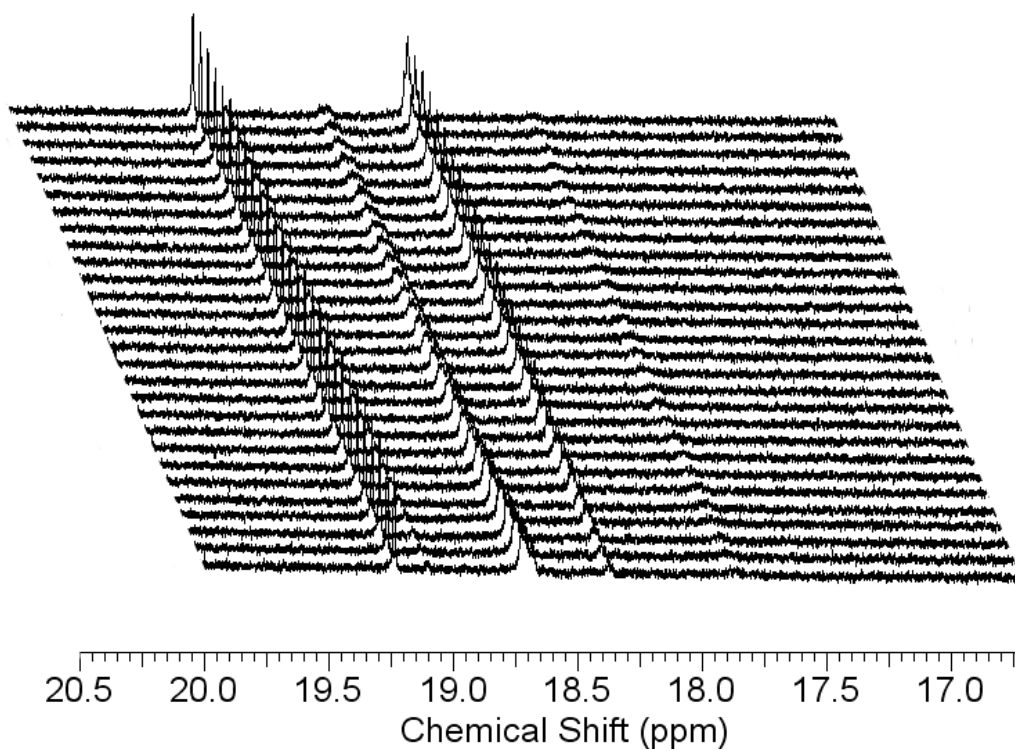
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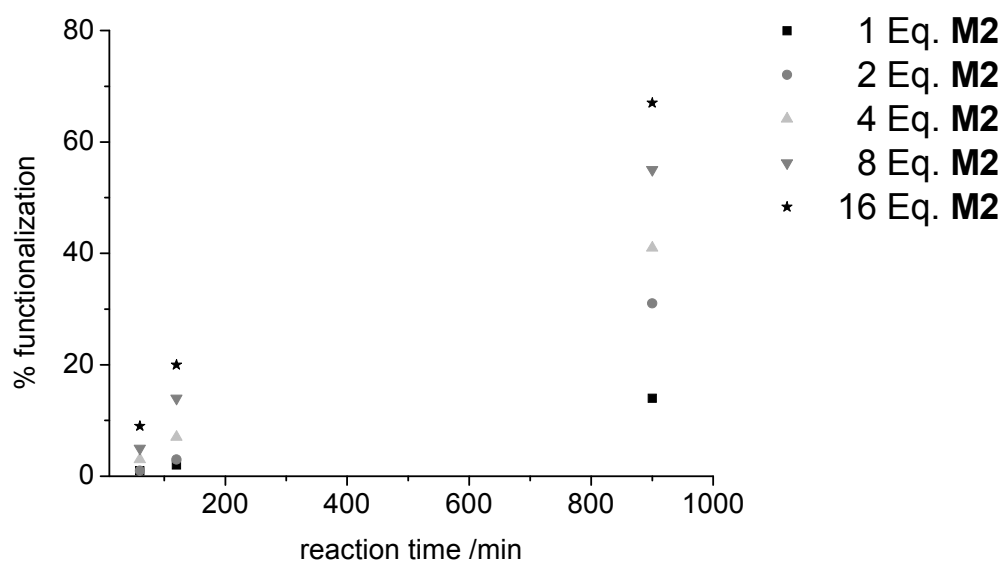
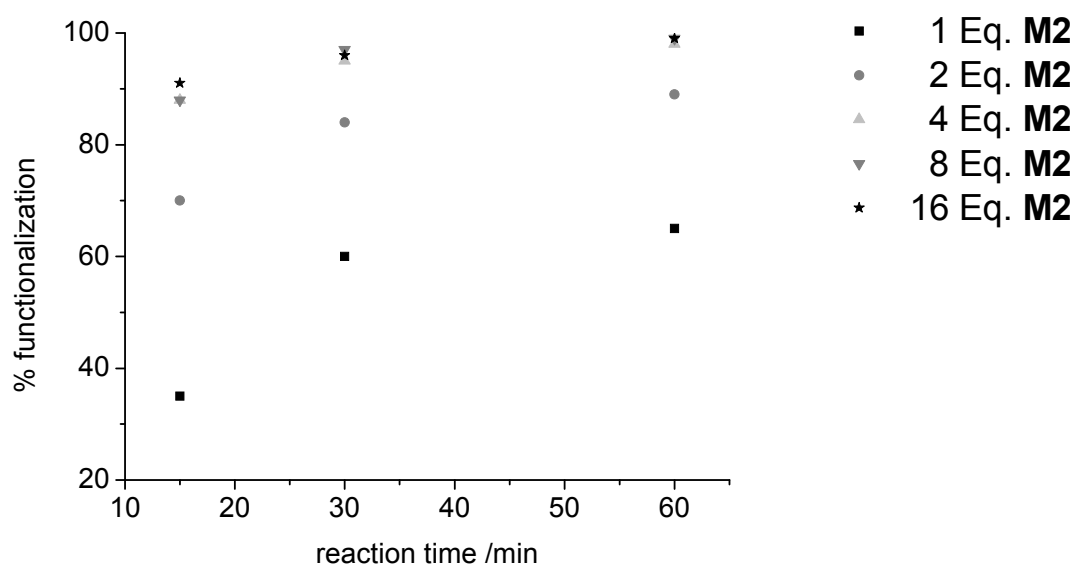
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S-1: *Top:* Kinetic ^1H -NMR of the reaction of catalyst **C1** initiated with 15 equivalents **PNI** after addition of 10 equivalents of **M1**. *Bottom:* kinetic evaluation of carbene integrals.

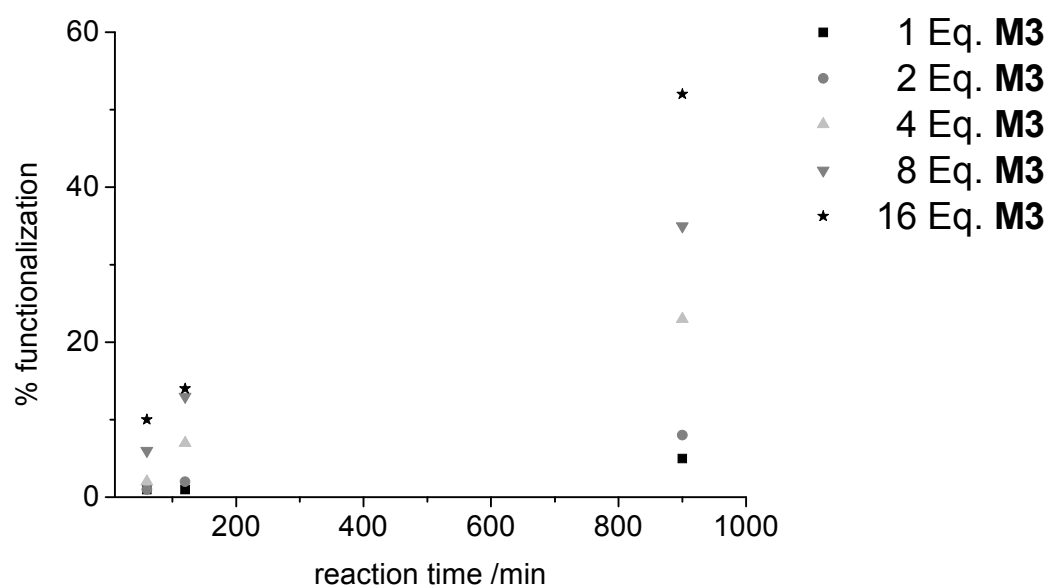
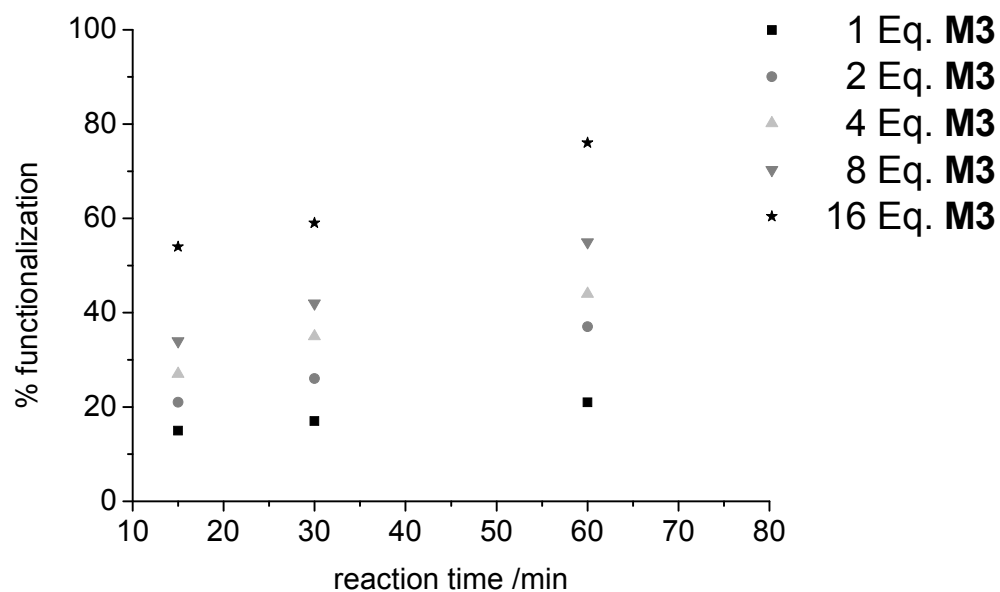


S-2: *Top:* Kinetic ^1H -NMR of the reaction of catalyst **C1** initiated with 15 equivalents **PNI** after addition of 10 equivalents of **M3**. *Bottom:* kinetic evaluation of carbene integrals.



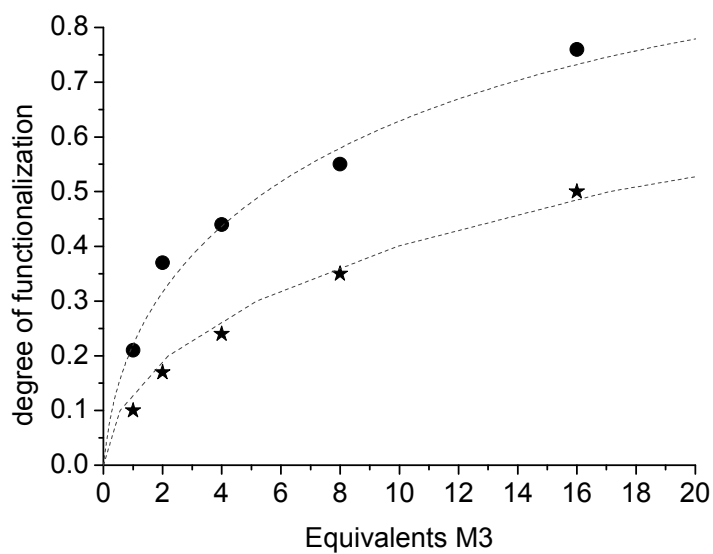
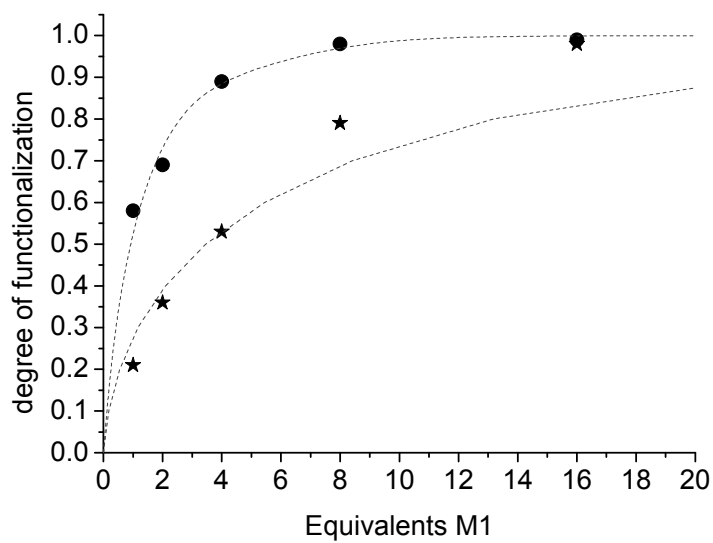
S-3: Degrees of polymer functionalization with different amounts of **M2**

Top: with **C1**. *Bottom:* with **C2**.



S-4: Degrees of polymer functionalization with different amounts of **M3**

Top: with **C1**. *Bottom:* with **C2**.



S-5: Degrees of functionalization vs. Excess of dioxepine monomer **M1** (*top*) or **M3** (*bottom*) and fitted theoretical values (dashed lines) for poly(**PNI**) initiated with catalyst **C1** (squares) and catalyst **C2** (stars).

Excess M1	Catalyst C1			Catalyst C2		
	time (min)	M _n	PDI	time (h)	M _n	PDI
1	Reference	6400	1.23	Reference	2500	1.08
	15	6500	1.20	1	2400	1.15
	30	6700	1.15	2	2800	1.10
	60	6400	1.16	12	3100	1.10
2	Reference	6100	1.16	Reference	2600	1.08
	15	5800	1.15	1	2600	1.08
	30	6100	1.17	2	2700	1.10
	60	5900	1.17	12	3200	1.13
4	Reference	5900	1.16	Reference	2600	1.09
	15	5700	1.16	1	2500	1.07
	30	5900	1.17	2	2700	1.09
	60	6100	1.17	12	2900	1.16
8	Reference	6900	1.12	Reference	2300	1.09
	15	6000	1.16	1	2500	1.09
	30	5900	1.17	2	2600	1.10
	60	6000	1.17	12	2600	1.15
16	Reference	6000	1.16	Reference	2400	1.08
	15	5900	1.15	1	2500	1.10
	30	5600	1.19	2	2300	1.12
	60	5900	1.15	12	2500	1.13

S-6: SEC-RI results of the functionalization series with dioxepine monomer **M1**.

Excess M3	Catalyst C1			Catalyst C2		
	time (min)	M _n	PDI	time (h)	M _n	PDI
1	Reference	6000	1.24	Reference	2400	1.08
	15	6000	1.24	1	2300	1.08
	30	6100	1.22	2	2400	1.08
	60	6000	1.23	12	3200	1.10
2	Reference	5700	1.22	Reference	2500	1.07
	15	5500	1.24	1	2300	1.08
	30	5500	1.24	2	2500	1.07
	60	5500	1.25	12	3000	1.09
4	Reference	5800	1.20	Reference	2400	1.06
	15	5400	1.25	1	2300	1.07
	30	5500	1.22	2	2300	1.08
	60	5400	1.25	12	2700	1.12
8	Reference	5600	1.22	Reference	2400	1.06
	15	5900	1.21	1	2200	1.07
	30	5500	1.24	2	2300	1.09
	60	5300	1.26	12	2500	1.15
16	Reference	6300	1.19	Reference	2300	1.06
	15	5800	1.21	1	2200	1.07
	30	6000	1.22	2	2300	1.07
	60	5900	1.19	12	2700	1.14

S-7: SEC-RI results of the functionalization series with dioxepine monomer **M3**.